

REMARKS

At the issuance of the outstanding office action, Claims 1-15 were pending in the application and were rejected under 35 USC §102(b) or 35 USC §103(a) as anticipated or obvious in view of three (3) references taken individually, Godwin, Jr. (3, 453, 493); Hampton (1, 930, 953); and, Springer (2, 888, 161).

Claims 1, 7, 13, 14 and 15 have been amended to more particularly point out that which applicants regard as their invention. Claims 16 – 24 have been added. Applicants respectfully request withdrawal of the grounds for rejection in light of these amendments and the following remarks.

Claims 7-15 stand rejected under 35 USC §102(b) as anticipated by Goodwin, Jr. (3, 453, 493). Goodwin, Jr. relates to a system of static cables for above-ground steel tanks and more particularly, to a system of flexible cables attached between the roof interior and a floating deck and between the underneath portion of a floating deck and exterior ground. As seen in Figure 1 of the reference, physically long wires (18 and 20) having significantly high self inductance are illustrated. Wires such as these are intended to bleed off static charges that build up over long periods of time (seconds or even minutes). The present invention is directed to a method and apparatus which use very short bonding jumpers of low inductance, which are required to effectively carry lightning discharge current that builds up from zero to maximum over a period of approximately one microsecond. See page 10, line 22 through page 11, line 8 of the present specification. So, the reference neither discloses nor suggests the present bonding strap which has a length to minimize its self inductance. In addition, the wire arrangement of the reference does not provide a preferred path for dissipating electrical current through an oxygen deficient environment because

static cable 18 which carries static discharge is disposed entirely above the liquid level.

The Goodwin, Jr. reference, in addition to the above deficiencies, neither discloses nor suggests having the electrical contact with an inner wall of the tank being made through a sliding shoe seal assembly (Claim 9); having a bonding strap no longer than the allowed seal tolerances between the floating roof and the shoe assembly at locations the bonding strap is connected there between (Claim 10).

Claims 1, 3, 4, 6, 7, 9, 10 and 12-15 stand rejected under 35 USC §102(b) as being anticipated by Hampton (1, 930, 953). Hampton relates to a seal for sealing the space between a floating roof and the side walls of a tank.

The outstanding Office Action relies on the disclosure of a septum (8) which contacts an inner wall of the tank below the liquid level and is connected to a floating roof below the liquid level. The stated intent of the example given in the Hampton disclosure (page 2, lines 56-61) "...such as, impregnated asbestos and metal fabric" has to do with durability of the septum and nothing to do with its ability to carry lightning discharge current. Hampton was attempting to solve an entirely different problem than the problem addressed by the present invention. Hampton was trying to prevent the evaporation of free liquids whereas the present invention relates to the protection of the tank from the effect of lightning strikes.

It has long been established that an accidental disclosure does not constitute an anticipation. *Tilghman v. Proctor* 102 U.S. 707 (1881). Applicants respectfully submit that Hampton's disclosure of a gas-tight fabric curtain or flexible septum made of metal fabric as shown in Figure 1 was made "accidentally and

unwittingly" with respect to the electrical properties of the present invention and such disclosure would not constitute an anticipation as a matter of law.

Hampton's disclosure was not recognized by those persons of ordinary skill in the art to which the present invention pertains (protection of floating roof storage tanks from the effects of lightning) as evidenced by the standard industry practice of locating shunts above the seals. This is discussed in the present specification and is further supported by the patents cited by Applicants.

Hampton is completely devoid of any disclosure or suggestion of an apparatus of method of protecting a floating roof tank from the effects of lightning strikes.

Indeed, there is no discussion of any electrical property of the fabric curtain. The flexible septum assists in rendering the seal more gas-tight to prevent the loss of liquid. Whether or not the septum is electrically conductive is not relevant to Hampton's invention and that property is unnecessary to effect the stated purpose. Indeed, Hampton equates metal fabric with impregnated asbestos, the latter of which is not conductive.

Claims 1, 3, 4, 6, 7, 9, 10 and 12-15 stand rejected under 35 USC §102(b) as anticipated by Springer (2, 888, 161). The Springer reference specifically cites "static electrical discharge", "static discharge of electricity", "static electrical charges", and "effective static drain path" and does not mention the fast rise time of lightning discharge current. Since the shunting device of Springer (comprised of 68, 66, 70, 60, 56, 58, 62 and 67 of Figure 1) is not direct and short path, it has not been configured to minimize its self inductance. Springer refers to the "discharge of static electrical potential" and not to the ability to carry lightning discharge current, which could amount to tens or hundreds of thousands of amperes over an extremely short period of time. The claims of the present application have been amended to clarify that the electrical path is short and direct by pointing at the entire means for establishing communication is of a

length to minimize its self inductance, which is required to effectively carry lightning discharge current that builds up from zero to maximum over a period of approximately 1 microsecond. See page 10, line 22 through page 11, line 8 of the present specification.

Claims 2, 5, 8 and 11 stand rejected under 35 USC §103(a) as being unpatentable over Hampton or Springer. Applicants repeat their comments regarding Hampton and Springer in light of those comments and the deficiencies of those references with respect to 35 USC §102(b) and request that the rejection under 35 USC §103(a) be withdrawn.

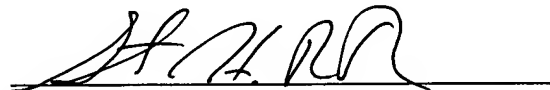
Further regarding the Hampton reference, the materials recited in the various dependent claims of the present application are selected because of their electrically conductive properties. Given the complete lack of disclosure in Hampton of electrical properties, Hampton provides no motivation to select the presently claimed materials.

Regarding the length of the septum, Hampton teaches that it should be maximized (Page 2, lines 5-10), whereas the length a bonding strap according the present invention is most preferably minimized to the greatest extent practicable to minimize its self inductance. In that respect, Hampton teaches away from the present invention.

In light of the foregoing, Applicants respectively request a favorable reconsideration of the outstanding Office Action and an early Notice of Allowance.

The Director of Patents is hereby authorized to charge any fees which maybe required, or credit any overpayment, to Deposit Account Number 03-1620 for the above-referenced patent application.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'S. H. Roth', is written over a horizontal line.

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Enclosures

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